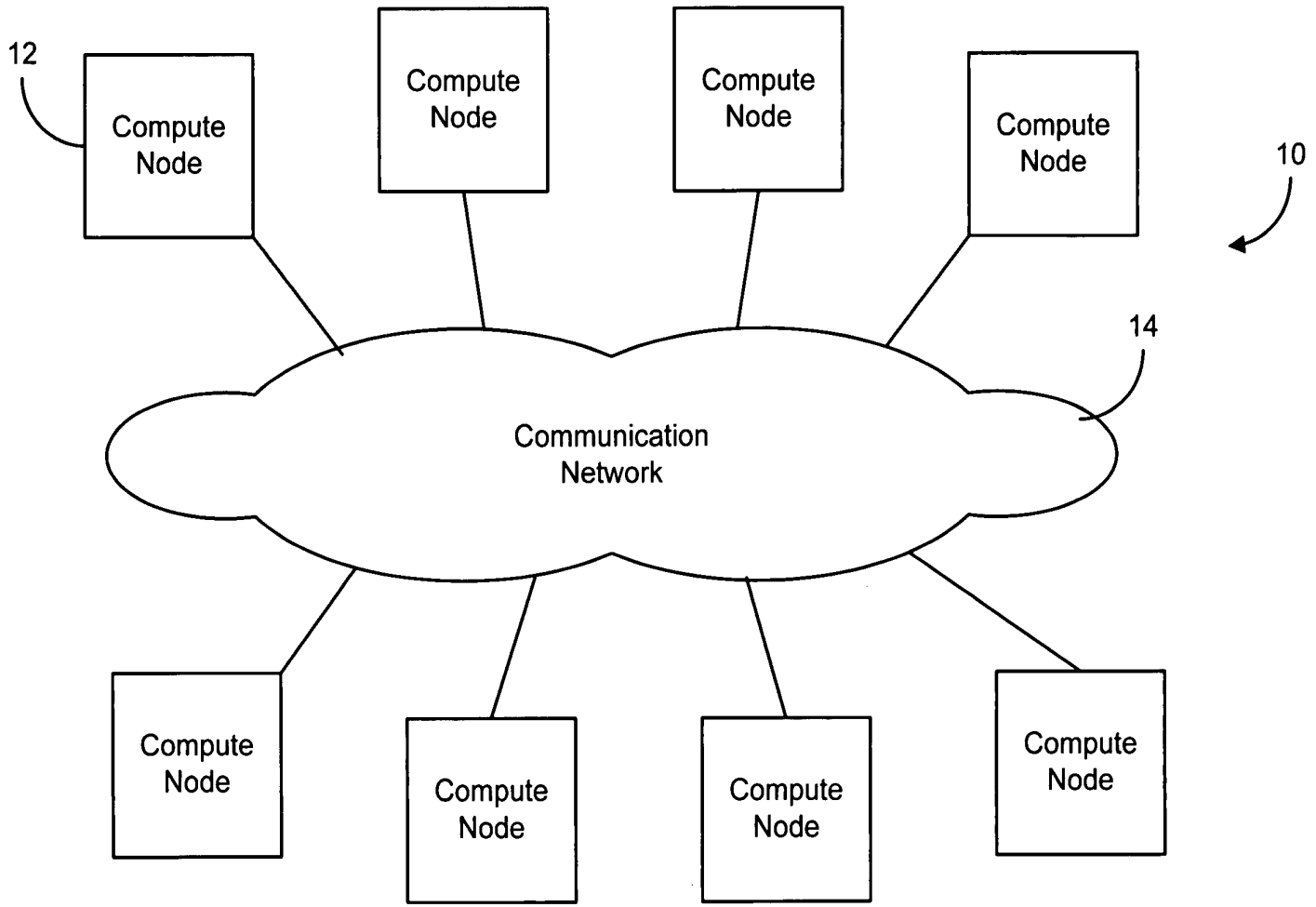

Figure 1
PRIOR ART

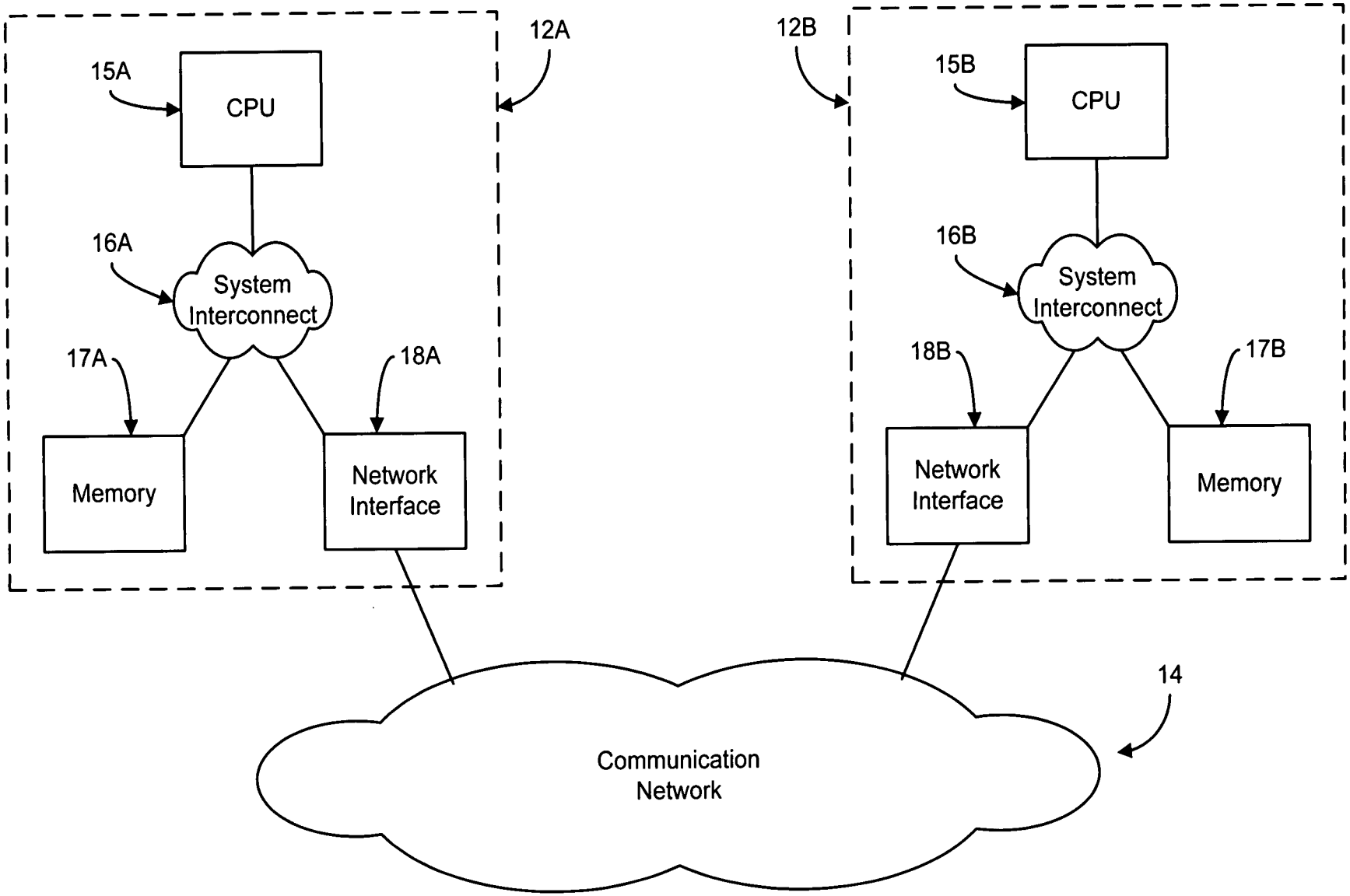

Figure 2
PRIOR ART

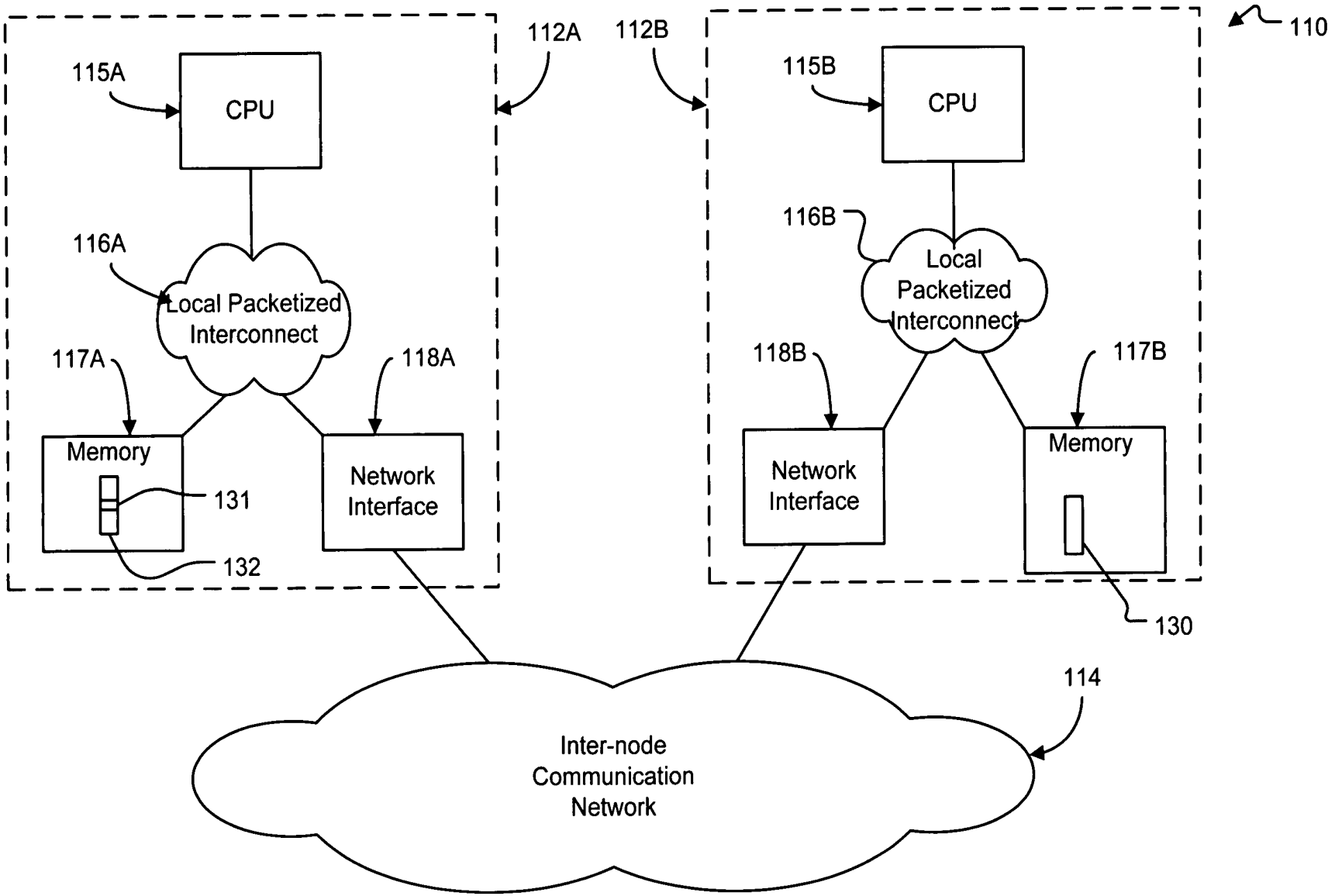
110
112A
112B
115A
CPU
116A
Local Packetized Interconnect
117A
118A
Memory
131
132
Network Interface
115B
CPU
116B
Local Packetized Interconnect
118B
117B
Network Interface
Memory
130
114
Inter-node Communication Network

Figure 2A

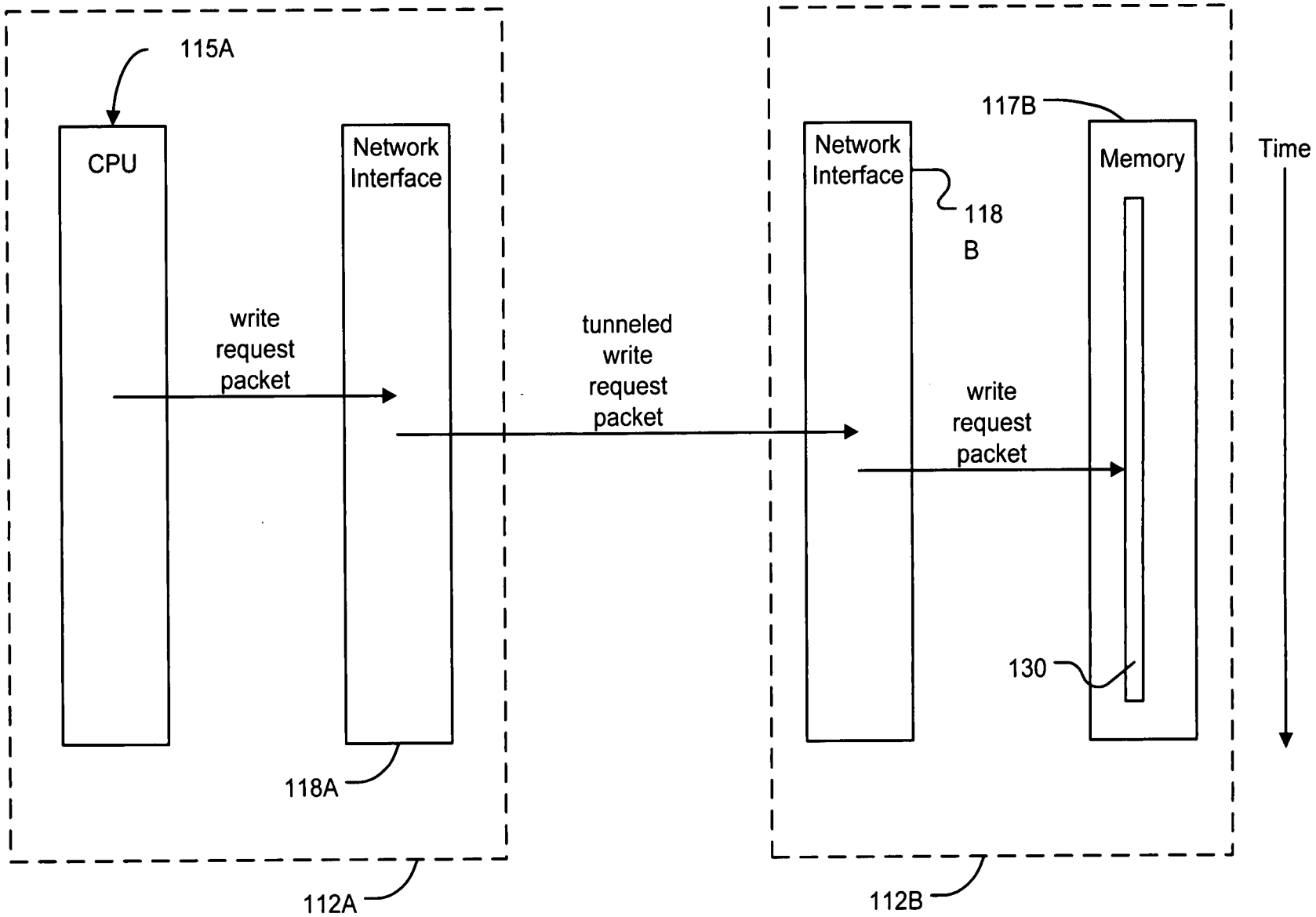
115A
CPU
Network Interface
write request packet
tunneled write request packet
118A
112A
117B
Network Interface
118 B
Memory
write request packet
130
Time
112B

Figure 3

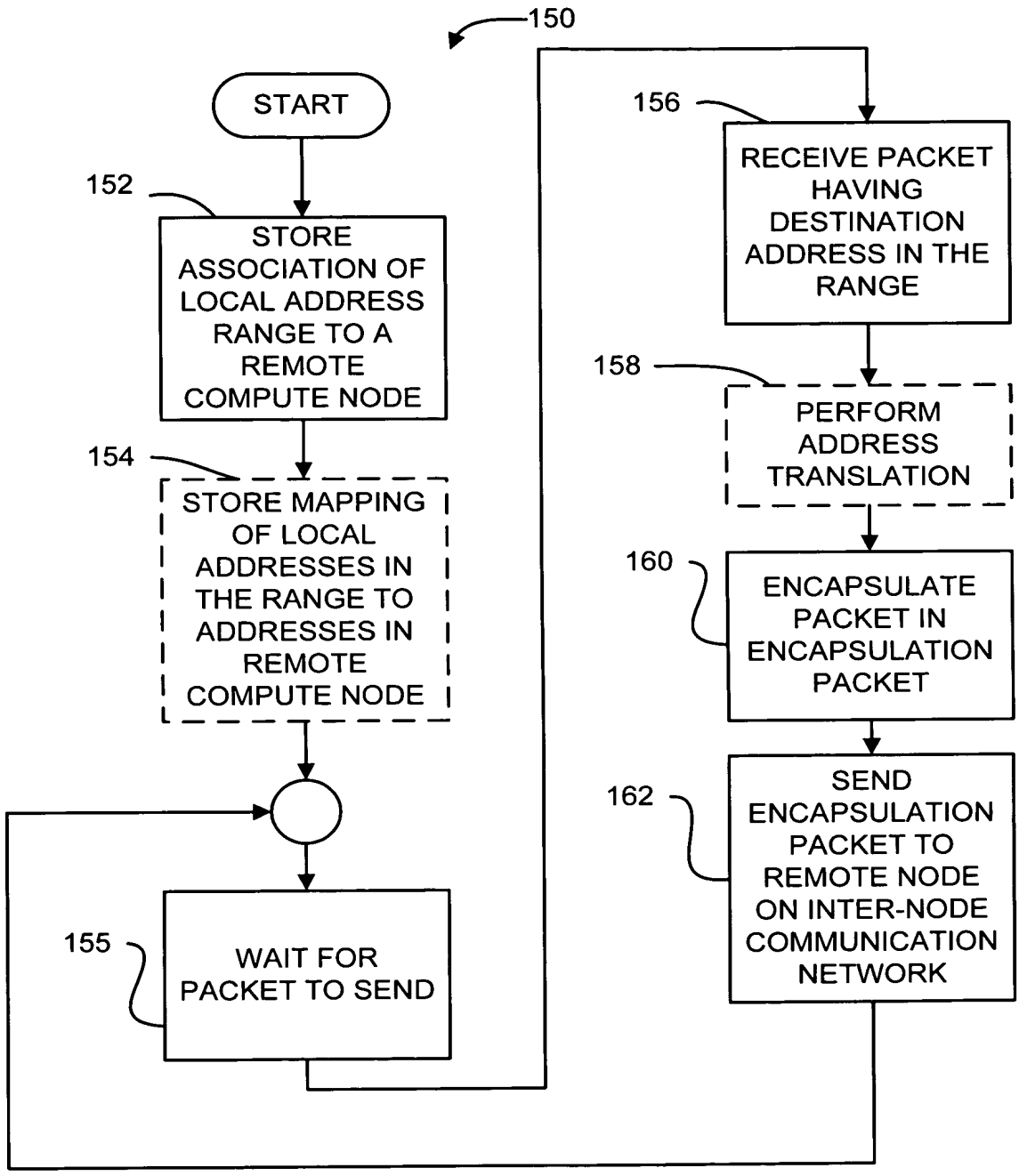
150
START
152
STORE ASSOCIATION OF LOCAL ADDRESS RANGE TO A REMOTE COMPUTE NODE
154
STORE MAPPING OF LOCAL ADDRESSES IN THE RANGE TO ADDRESSES IN REMOTE COMPUTE NODE
155
WAIT FOR PACKET TO SEND
156
RECEIVE PACKET HAVING DESTINATION ADDRESS IN THE RANGE
158
PERFORM ADDRESS TRANSLATION
160
ENCAPSULATE PACKET IN ENCAPSULATION PACKET
162
SEND ENCAPSULATION PACKET TO REMOTE NODE ON INTER-NODE COMMUNICATION NETWORK

Figure 3A

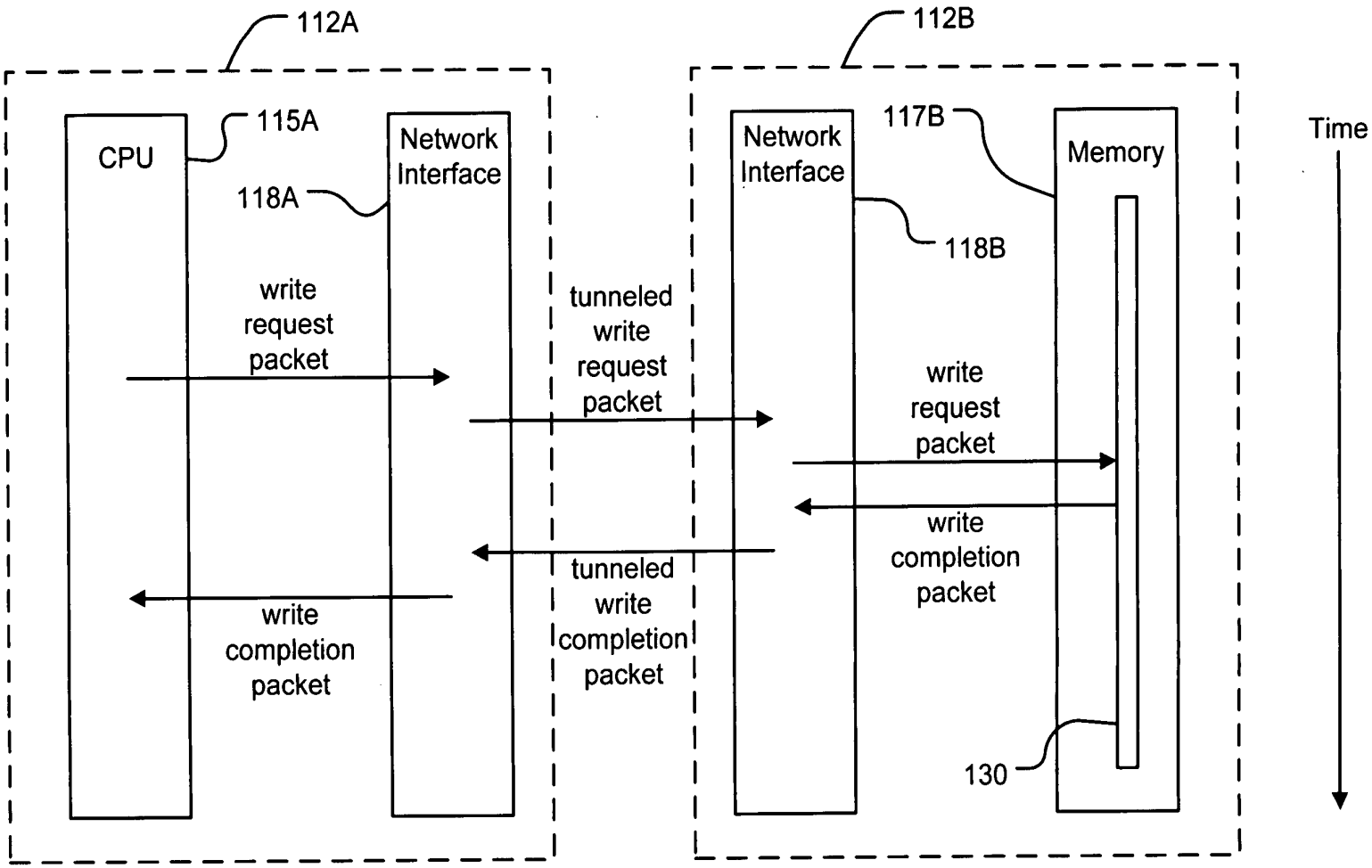
112A
112B
CPU
115A
Network Interface
118A
Network Interface
117B
Memory
118B
Time
write request packet
tunneled write request packet
write request packet
write completion packet
tunneled write completion packet
write completion packet
130

Figure 4

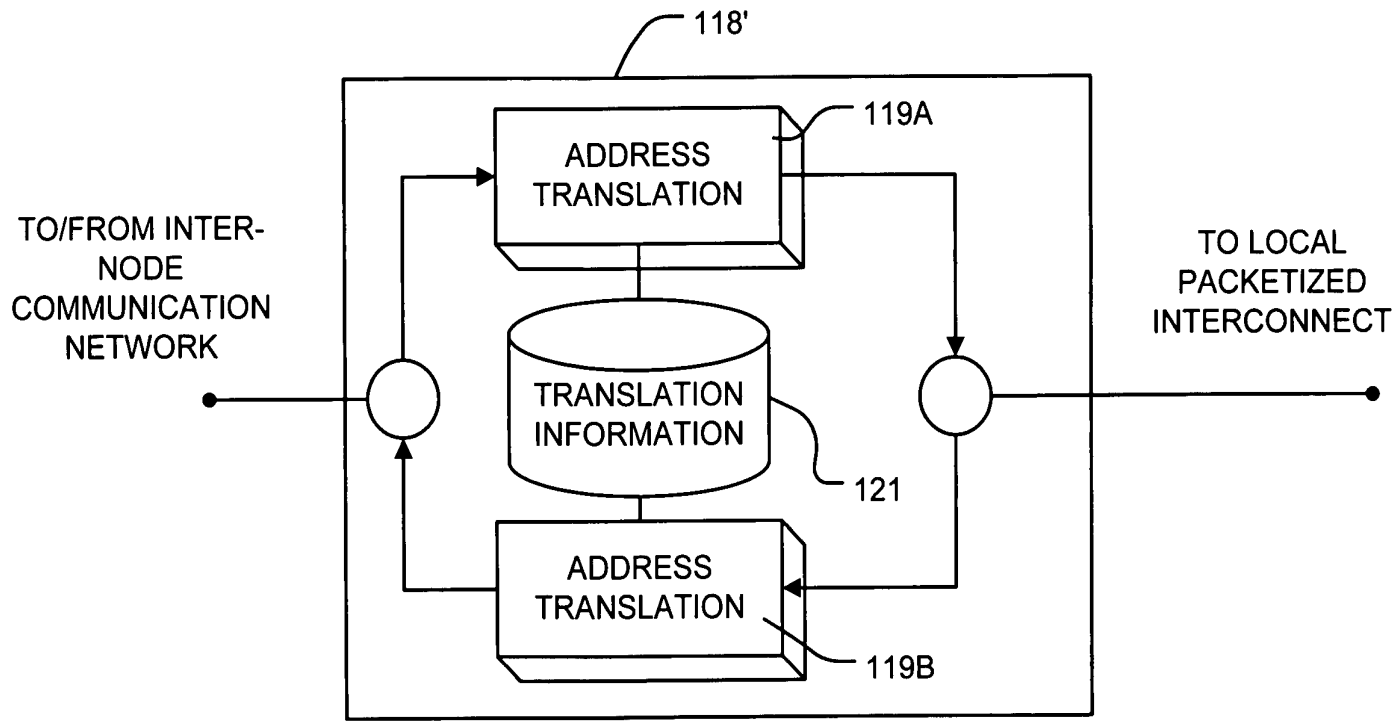
118'
119A
ADDRESS TRANSLATION
TO/FROM INTER-NODE COMMUNICATION NETWORK
TRANSLATION INFORMATION
121
TO LOCAL PACKETIZED INTERCONNECT
ADDRESS TRANSLATION
119B

Figure 4A

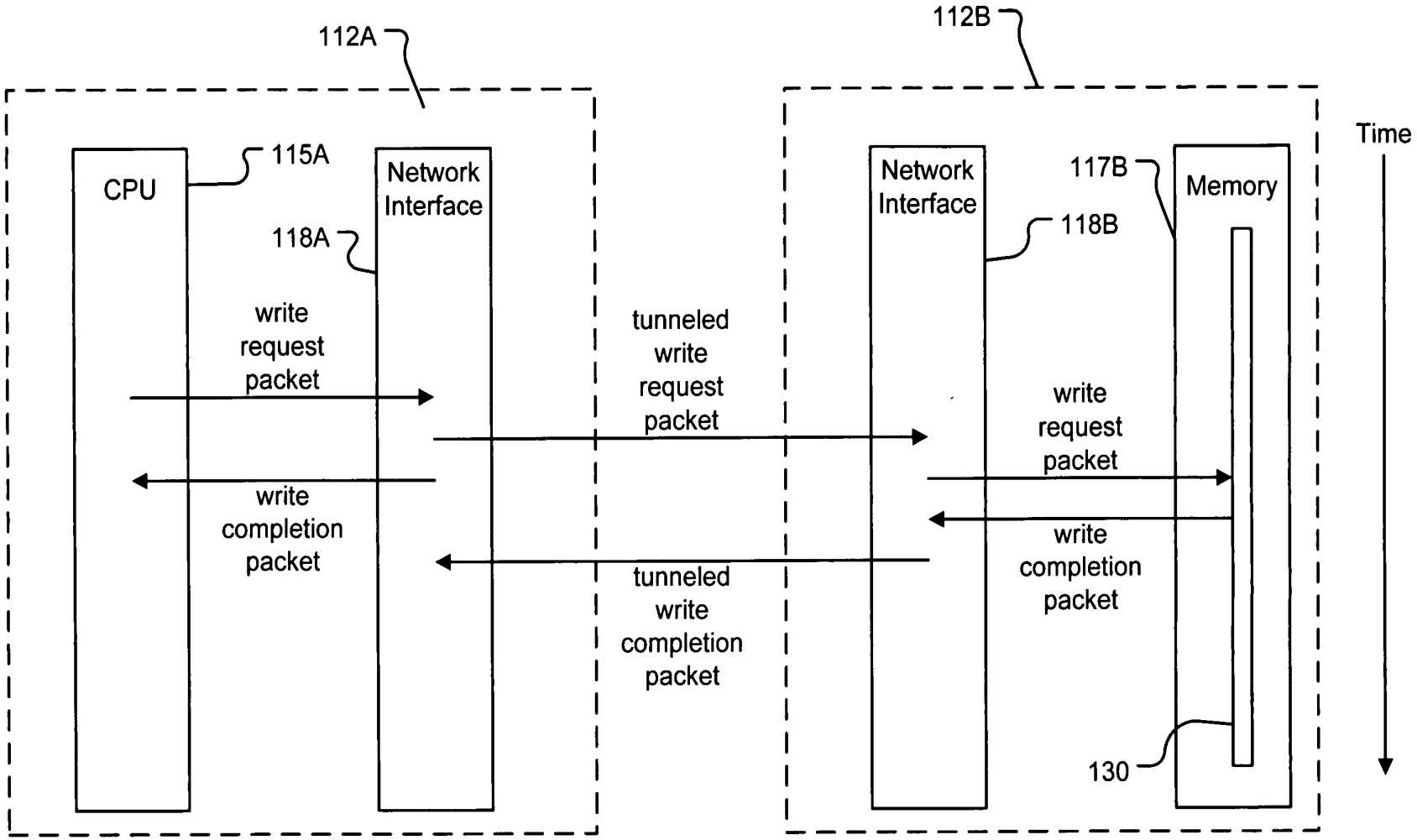
112A
112B
CPU
115A
Network Interface
118A
write request packet
write completion packet
tunneled write request packet
tunneled write completion packet
Network Interface
118B
117B
Memory
write request packet
write completion packet
130
Time

Figure 5

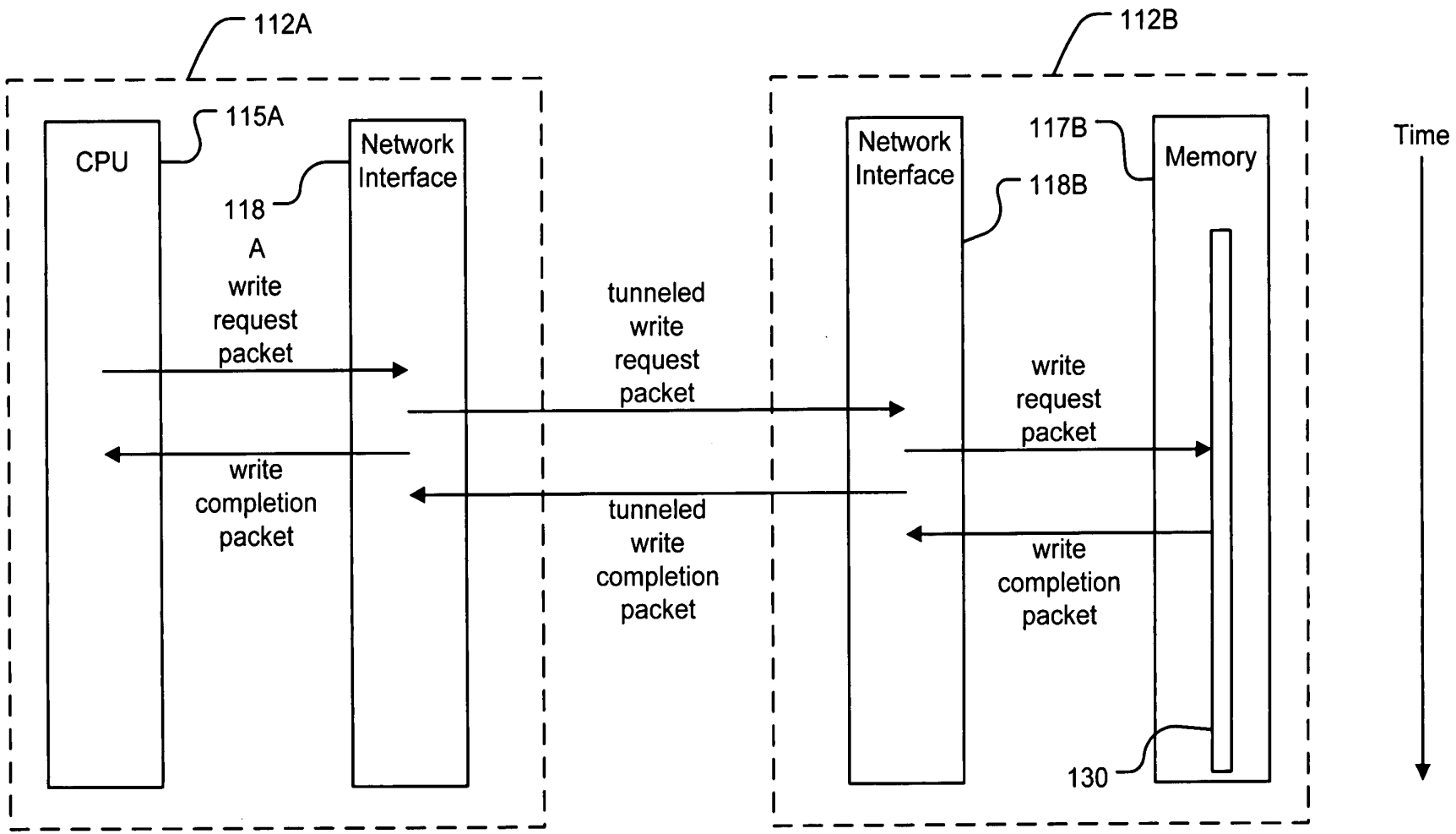
112A
112B
115A
CPU
Network Interface
118 A
write request packet
write completion packet
tunneled write request packet
tunneled write completion packet
Network Interface
117B
Memory
118B
write request packet
write completion packet
130
Time

Figure 6

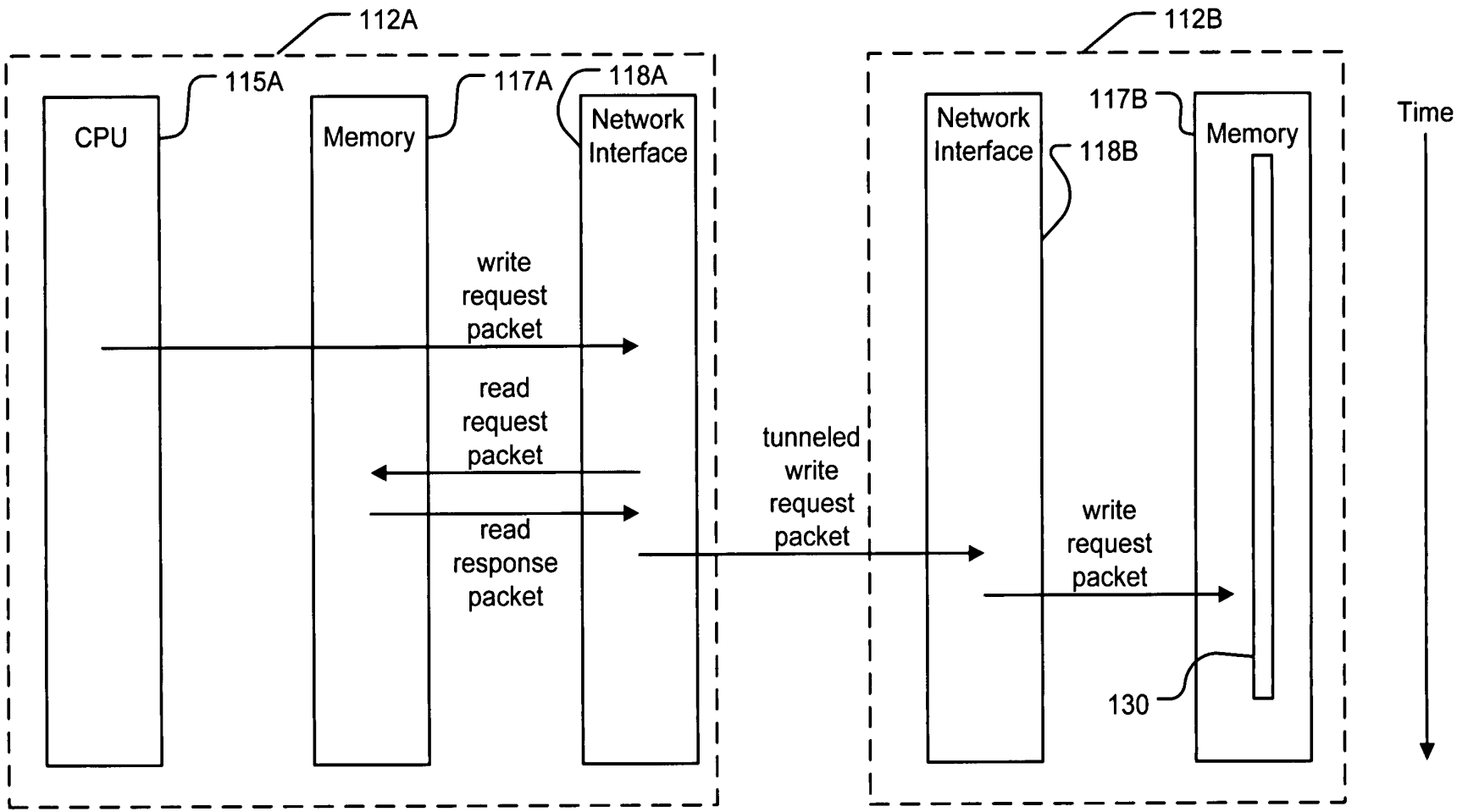
112A
115A
CPU
117A
Memory
118A
Network Interface
write request packet
read request packet
read response packet
tunneled write request packet
112B
Network Interface
118B
117B
Memory
write request packet
130
Time

Figure 7

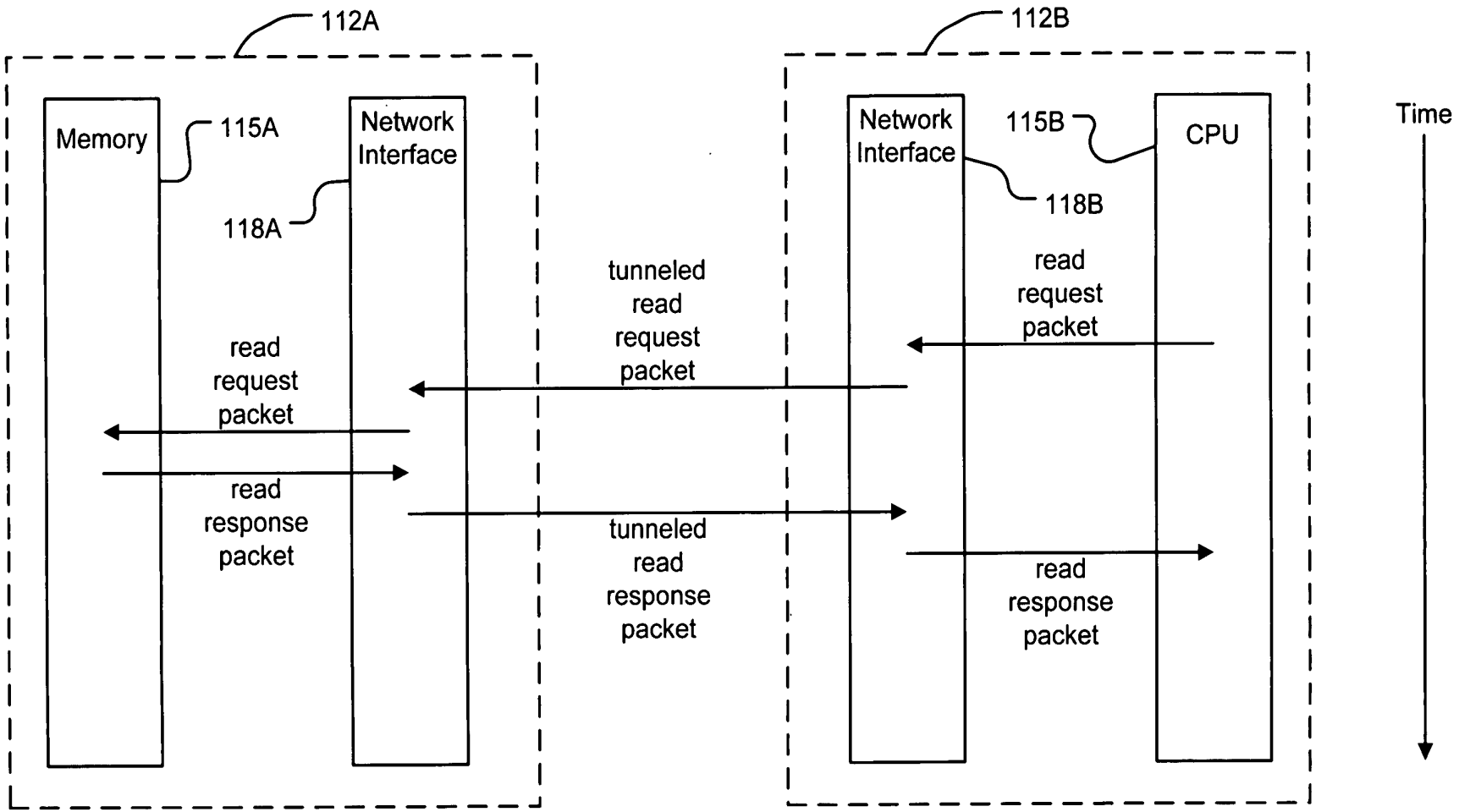
112A
112B
Memory
115A
Network Interface
118A
Network Interface
115B
CPU
118B
Time
tunneled read request packet
read request packet
read request packet
read response packet
tunneled read response packet
read response packet

Figure 8

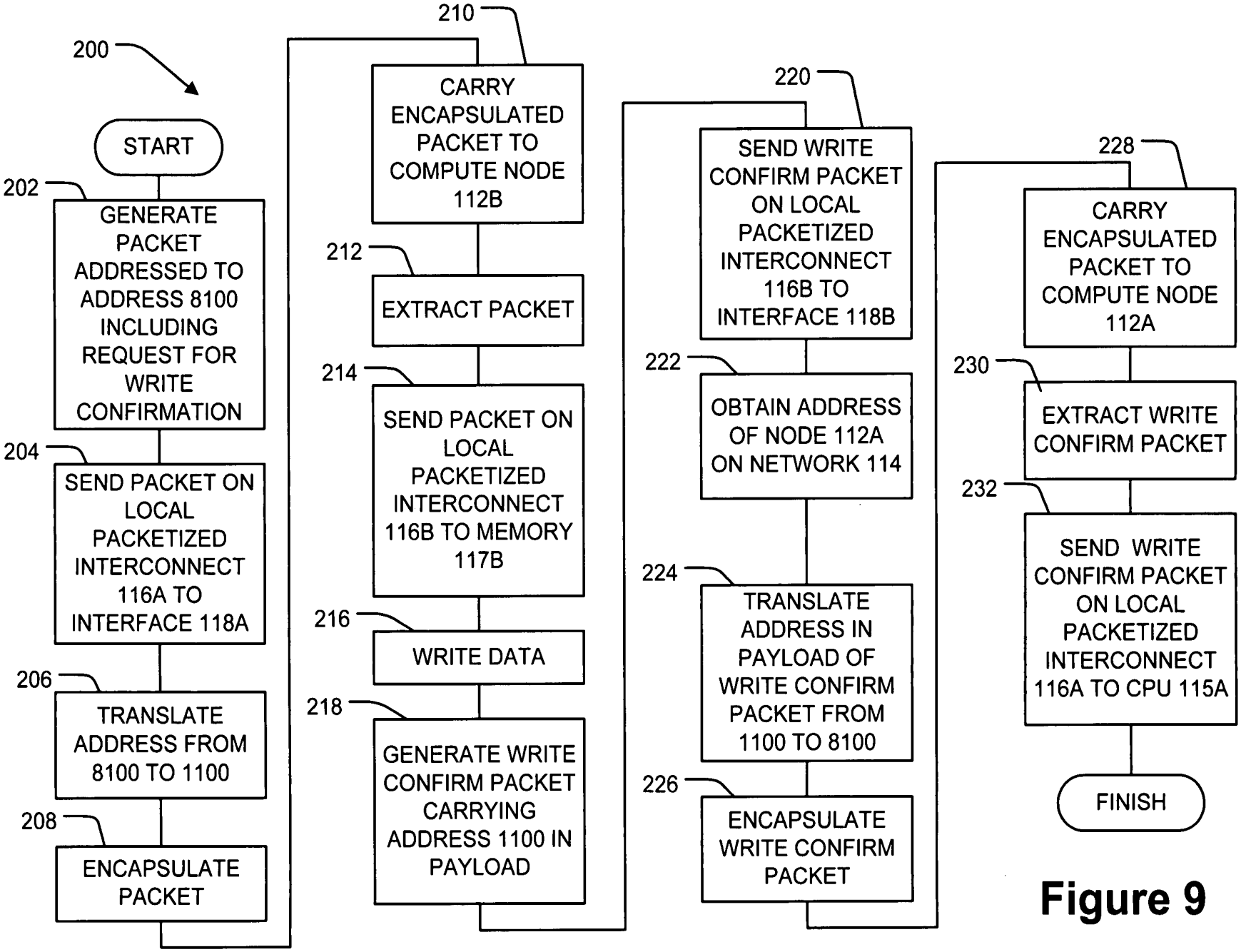
200
START
202
GENERATE PACKET ADDRESSED TO ADDRESS 8100 INCLUDING REQUEST FOR WRITE CONFIRMATION
204
SEND PACKET ON LOCAL PACKETIZED INTERCONNECT 116A TO INTERFACE 118A
206
TRANSLATE ADDRESS FROM 8100 TO 1100
208
ENCAPSULATE PACKET
210
CARRY ENCAPSULATED PACKET TO COMPUTE NODE 112B
212
EXTRACT PACKET
214
SEND PACKET ON LOCAL PACKETIZED INTERCONNECT 116B TO MEMORY 117B
216
WRITE DATA
218
GENERATE WRITE CONFIRM PACKET CARRYING ADDRESS 1100 IN PAYLOAD
220
SEND WRITE CONFIRM PACKET ON LOCAL PACKETIZED INTERCONNECT 116B TO INTERFACE 118B
222
OBTAIN ADDRESS OF NODE 112A ON NETWORK 114
224
TRANSLATE ADDRESS IN PAYLOAD OF WRITE CONFIRM PACKET FROM 1100 TO 8100
226
ENCAPSULATE WRITE CONFIRM PACKET
228
CARRY ENCAPSULATED PACKET TO COMPUTE NODE 112A
230
EXTRACT WRITE CONFIRM PACKET
232
SEND WRITE CONFIRM PACKET ON LOCAL PACKETIZED INTERCONNECT 116A TO CPU 115A
FINISH

Figure 9

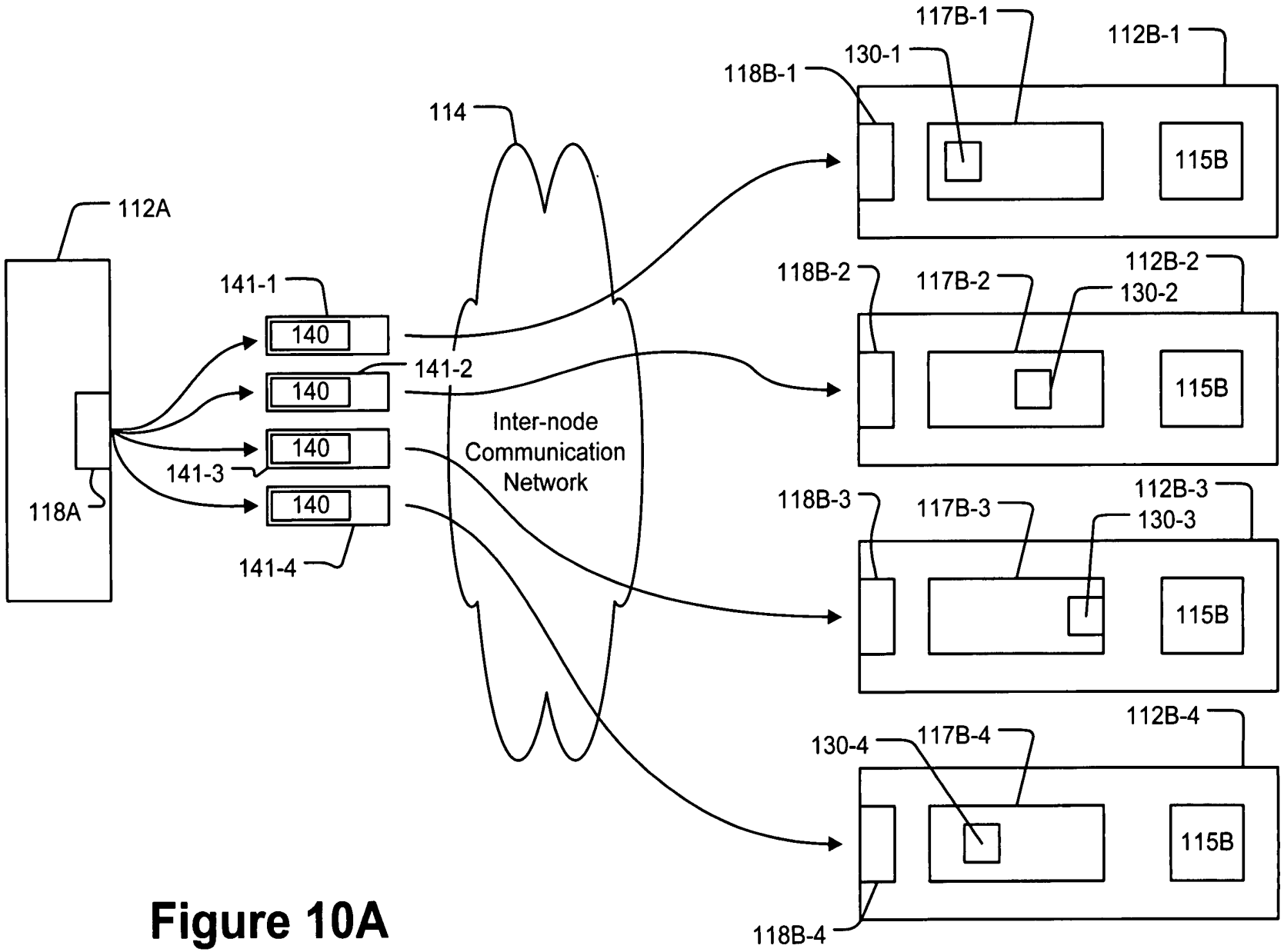
112A
118A
141-1
140
141-2
140
141-3
140
140
141-4
114
Inter-node
Communication
Network
117B-1
130-1
118B-1
112B-1
115B
118B-2
117B-2
130-2
112B-2
115B
118B-3
117B-3
130-3
112B-3
115B
130-4
117B-4
112B-4
115B
118B-4

Figure 10A

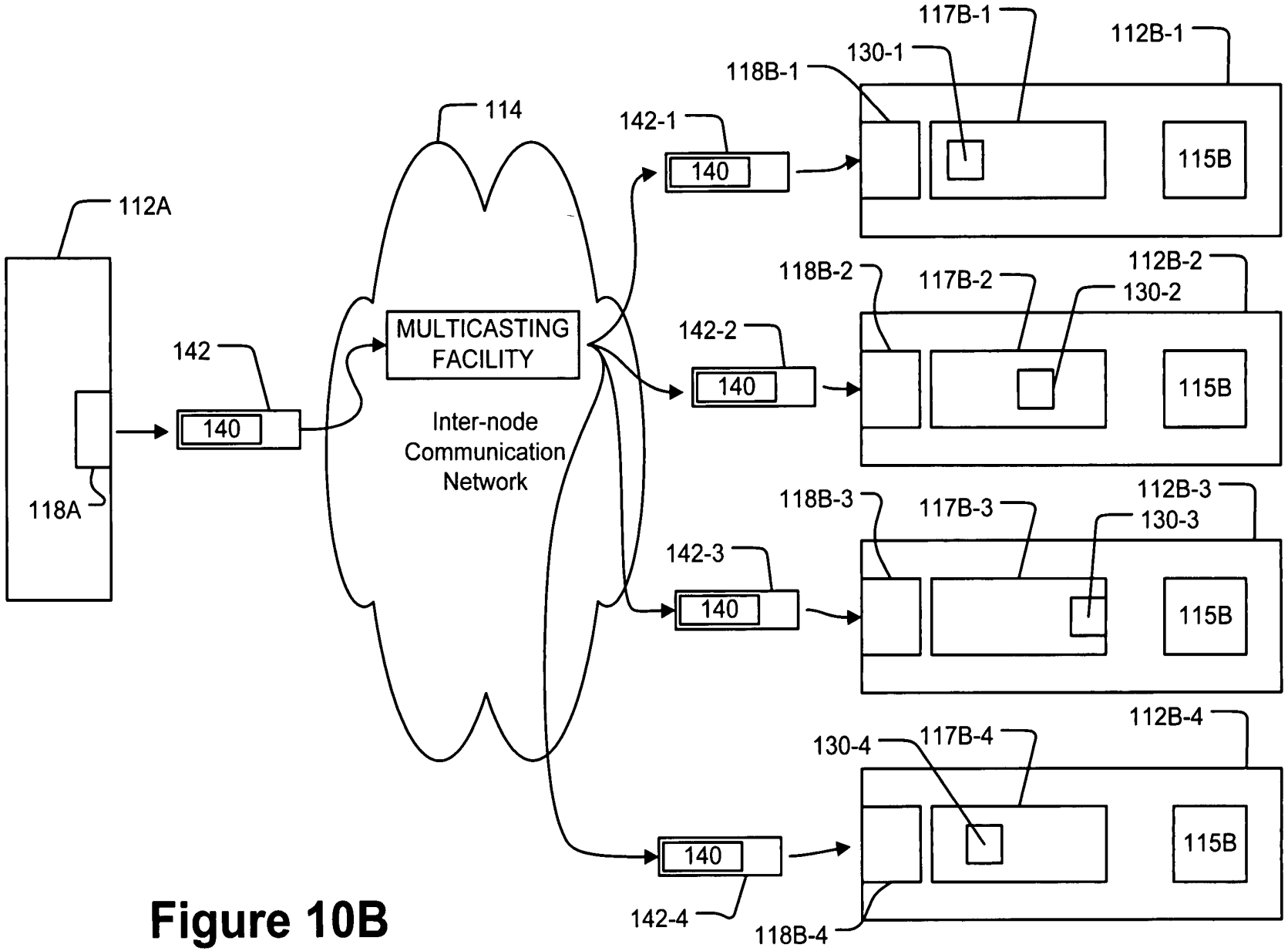
112A
118A
142
140
114
MULTICASTING FACILITY
Inter-node Communication Network
142-1
140
118B-1
130-1
117B-1
112B-1
115B
142-2
140
118B-2
117B-2
130-2
112B-2
115B
142-3
140
118B-3
117B-3
130-3
112B-3
115B
140
142-4
130-4
117B-4
112B-4
118B-4
115B

Figure 10B

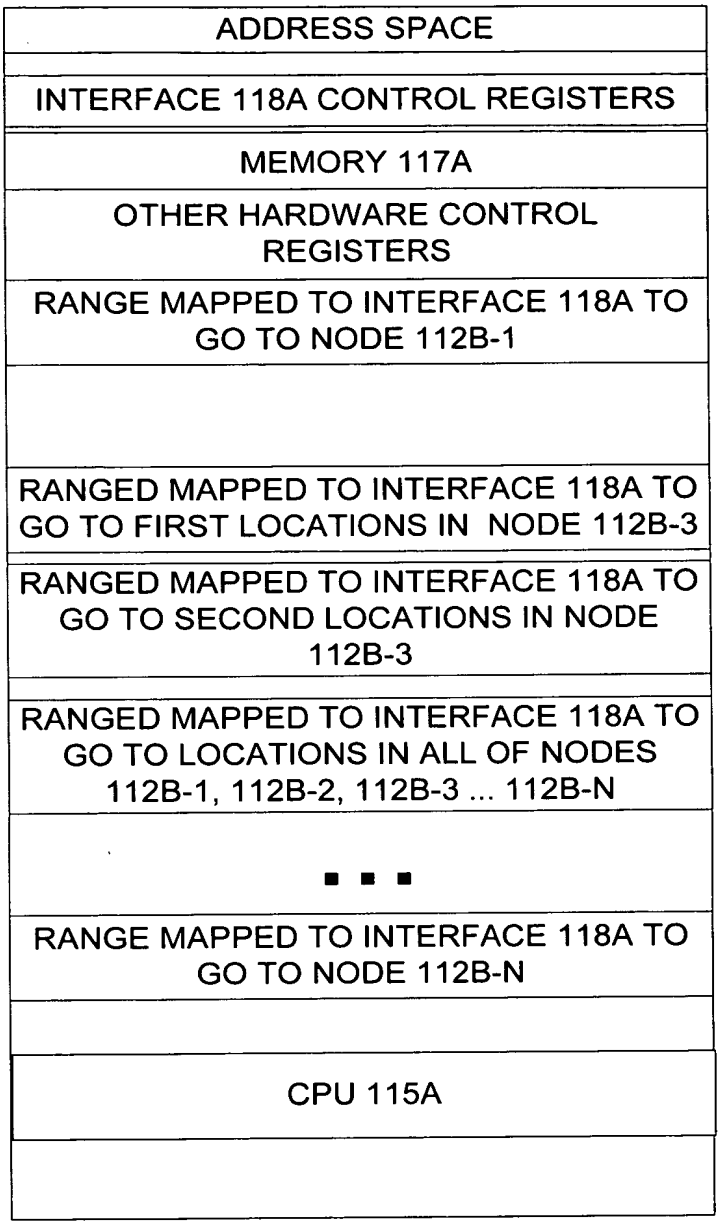
ADDRESS SPACE
INTERFACE 118A CONTROL REGISTERS
MEMORY 117A
OTHER HARDWARE CONTROL REGISTERS
RANGE MAPPED TO INTERFACE 118A TO GO TO NODE 112B-1
RANGED MAPPED TO INTERFACE 118A TO GO TO FIRST LOCATIONS IN NODE 112B-3
RANGED MAPPED TO INTERFACE 118A TO GO TO SECOND LOCATIONS IN NODE 112B-3
RANGED MAPPED TO INTERFACE 118A TO GO TO LOCATIONS IN ALL OF NODES 112B-1, 112B-2, 112B-3 ... 112B-N
RANGE MAPPED TO INTERFACE 118A TO GO TO NODE 112B-N
CPU 115A

Figure 11